ACTON BOARD OF HEALTH

Doug Halley
Health Director

472 Main Street
Acton, MA 01720

Telephone 978-264-9634
Fax 978-264-9630

CERTIFIED MAIL

June 3, 1999

Town of Concord Water Department
25 Love Lane
Concord, MA 01742

Dear Applicant:

According to our records, we have not received the 1999 Renewal Application for the Hazardous Materials Control Permit that your facility holds within the Town of Acton. Enclosed please find the renewal application for this permit. Please submit this application with the application fee and fine that has been assessed to you within seven days of receipt of this letter. Failure to do so will result in additional fines being levied against your facility.

Acton Board of Health

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ACTON BOARD OF HEALTH

Douglas Halley
Health Director

472 Main Street
Acton, MA 01720

Telephone 978-264-9634
Fax 978-264-9635

March 3, 1998

Mr. Marios Papadopoulis
Environmental Analyst
Town Of Concord Water Supply
25 Love Lane
Concord, MA 01742

Dear Mr. Papadopoulis:

The Acton Board of Health at their regularly scheduled meeting of February 23, 1998 unanimously approved a Hazardous Materials Control Permit for the Town of Concord's Nagog Pump Station, located on Great Road, Acton, MA. The Board's approval was granted based on the information provided within the Hazardous Materials Control Application and the observations and recommendations of the Acton Health Department.

The Board of Health requests that an application fee of $380.00 be submitted to the town, within thirty (30) days after receipt of this letter. Should you have any questions regarding the Board's approval of the Hazardous Materials Control Permit please contact me at 264-9634.

Sincerely,

Doug Halley
Health Director

January 14, 1998

Report on Site Visit: Nagog Pump Station/Town of Concord
near 2A and 27 on 2A
Contact during Visit: Marios Papadopoulis, Environmental Analyst
Date of Visit: January 14, 1998
Sanitarian: Sharon Walker Mastenbrook

Description of Hazardous Materials Use

The Nagog Pump Station pumps and treats water from Nagog Pond. The treatment consists of adding chlorine gas, sodium fluoride, sodium-zinc polyphosphate, and potassium hydroxide to raw water from Nagog Pond during the months May to September when the Water Treatment by Ozonation Plant off Acorn Park is not in use. At the present time the Nagog Pump Station is not operational because it not the season for its use.

Site Visit Observations

The plant consists of two floors. The ground floor has three rooms: The **Main Room,** the **Chlorine Gas Room,** and the **Zinc Room**. This level contains no floor drains. The **Basement Level** is one room which contains the building heating system (gas fired), a fluoride addition area, and a potassium hydroxide addition area. This level has one sump area with a rubber barrier around the sump (approximately two feet high). Into this sump empties a pipe which has constantly running water from an unknown source.

The **Chlorine Gas Room** contains 13 large chlorine gas cylinders (nine are empty) plus two cylinders (attached to the water lines) standing on a scale. The cylinders weigh 150 lbs. each. Mr. Papadopoulis stated that he did not know when the scale was last calibrated. The two cylinders on the scale are unchained. They are approximately three feet or less from the radiator. According to the EPA the radiator should not experience any temperature excursions such that it would become too hot in the room for cylinders to function properly. The 13 cylinders standing on the floor are chained together as a group loosely by one chain attached to the wall. This room can be entered only from an outside door on the north side of the building. Chlorine is on The List of Extremely Hazardous Substances. According to The Merck Index, 10th ed., its Odor Threshold is 0.2-0.4 ppm. The TLV is 0.5 and IDLH is 10 ppm. The EPA (Ray DiNardo, 617-565-9232. 112 Program, RCRA) strongly recommends an air monitor in areas with chlorine gas in use, as well as a forced draft ventilation system. The density of chlorine gas is 2.486. The EPA recommends that the floor have no openings which could serve as conduits to the floor below, in case any gas leaked from the cylinders and settled through the openings to the basement. At present there is no air monitor or ventilation system for the room.

The **Zinc Room** contains an approximately 20 gallon trash can for storage of sodium-zinc polyphosphate (powdered form).The sodium-zinc polyphosphate is added to water in two approximately 40 gallon barrels for feeding into the water system. All three chemical containers lack secondary containment. There is also a sink in the room for drawing raw and treated water for sampling. Mr. Papadopoulis stated the sink drained

into the basement and then into the brook next to the building. The room contains a wall-mounted emergency eye wash station.

The **Main Room** contains a generator, two large tanks (approximately 500 gallons each) labeled "Corrosive," "Caustic," and "sodium hydroxide". Mr. Papadopoulis indicated that the tanks were not in use currently, but will be used in the future. They will be filled with potassium hydroxide. At present these tanks lack secondary containment. The connecting pipes to one tank leak. There is a small barrel (approximately 20 gallons) labeled "Danger Caustic" containing a liquid. Mr. Papadopoulis was not sure what the liquid was. The barrel lacked secondary containment. There is also a generator which uses a car battery and has an oil intake opening. At the time of inspection the battery had evidence of a small leak. There were no drips under the oil intake opening.

The **Basement Level** contains a barrel labeled "Caustic" (approximately 100 gallons) with a feeder line into the water line (East wall), a fluoride barrel (approximately 40 gallons) with a feeder line into the water line (North wall), a sump (East wall) which during the site inspection was constantly receiving water from a pipe, a heating system (North wall), and a plumbed eye wash station which drains to the concrete floor (center of room). There is no secondary containment for the chemical barrels. There is no floor drain in the room except for the sump with a rubber berm. The fluoride is stored in powdered form in an approximately 20 gallon barrel. The caustic is added to the basement barrel in liquid from the tanks upstairs. The pump on the caustic feeder line leaks oil and two lines coming from the caustic tank also leak onto the floor.

Outside the front of the building there is a small parking area for trucks and other vehicles. Any Town of Concord truck which services the Nagog Pump Station contains a radio for emergency. In addition, each employee who enters the site carries a cellular phone for emergency calls. The building itself has a fire alarm. Mr. Papadopoulis was unsure where the alarm rings.

Comments

At present the application is not complete. Missing are the MSDS for all chemicals used on site, a completed application form, and an emergency plan.

Also, there are some deficiencies which need correction:

- creating secondary containment for all chemicals used on site (wet and dry
- provision of spill kits in each room: dry spill kits for the **Zinc Room** and the **Basement Level**; wet spill kit for the **Basement Level** and **Main Room**
- posting of emergency plan in each room (plan should include a parking plan for chemical delivery so that all deliveries are made from trucks parked completely off Rt. 2A and completely in the driveway.)
- posting of MSDSs in each room
- chaining all gas cylinders securely
- calibrating of the scale used to weigh the chlorine cylinders (Call Elaine at Acton Highway Department, 264-9624, and leave message for Mark Fitzpatrick, Acton Sealer of Weights and Measures, to arrange a time to calibrate the scale.)
- determining temperature range on radiator in **Chlorine Room**

- storing chlorine gas cylinder repair kit in the **Main Room**
- placing chain across stairway to basement
- labelling sink in the **Zinc Room**: "For use for water testing only: No chemicals to be poured down sing/No hand washing"
- establishing a hazardous waste container, properly labeled, for collection of any test waters with testing chemicals added
- labelling all drums and barrels and tanks appropriately
- identifying where sump in basement drains
- removing or labelling all unlabelled bottles and containers
- maintaining eye wash station in **Zinc Room** so that bottles of eye wash solution are full and current
- providing of chemical resistant goggles, gloves and apron for use when working with caustic chemicals (**Basement** and **Main Room**)
- placing drip pan under generator oil intake area when adding oil

Recommendations

I recommend the Nagog Pump Station receive a Hazardous Material Permit (#4 hazardous materials user and #8 hazardous materials storer industry large).

I recommend the following conditions be included in the permit:

1. All Hazardous Materials and Wastes shall be stored in a containment area capable of storing 110% of the largest unit volume stored in the containment area.

2. All Material Safety Data Sheets (MSDS) for the Hazardous Materials shall be stored on site, and shall be made available to all employees upon request and reviewed with all employees on a regular basis.

3. A Contingency Plan, including emergency contact numbers (Telephone Number of the owner, operator, etc.) and a sketch showing clearly all Hazardous Material and Waste locations, shall be submitted and updated annually, to the Board of Health, Fire Department, Police Department, and Civil Defense.

4. Emergency procedures and local Emergency Response Telephone Numbers (Health, Fire, Police, D.E.P., Civil Defense, etc.), should a spill occur, shall be posted in clear view of all employees wherever Hazardous Materials or Wastes are used or stored.

5. All Hazardous Wastes must be disposed of by a Licensed, D.E.P. approved, hauler or be recycled on site.

6. Copies of either all invoices or manifests, for any Hazardous Materials or Wastes, received or disposed, shall be submitted to the Board of Health annually.

7. All Hazardous Materials Containers shall be labeled and dated when filling first began.

8. Speedy Dry, or its equivalent, shall be kept in the storage area, in case of a Hazardous Materials or Wastes spill.

11. Protective Equipment, including chemical resistant gloves, eye goggles and (rubber) boots, in addition to soap and water, shall be made available to all employees, at all times, in any Hazardous Materials or Waste storage or use area.

13. A safety eye wash station shall be installed where any Hazardous Materials or Wastes are handled or used.

14. A fire extinguisher, containing an appropriate fire extinguishing agent, shall be placed in the Hazardous Materials Storage area.

15. No food or drink shall be stored or consumed in any area where Hazardous Materials are stored or used.

18. D.E.P. Generator Registration shall be provided annually upon renewal of the Hazardous Materials Storage Permit.

21. Gas cylinders shall not be rolled, even for short distances. They shall be moved by a suitable hand truck, in accordance with the permit holder's Gas Cylinder Handling Policy.

25. Prior to any new chemical or processes being used, the Board of Health shall be notified.

26. The operation of this facility shall be in compliance with all present and future regulations of E.P.A. and D.E.P. at all times. Nothing in this permit allows or requires non-compliance with all present and future applicable laws or regulations of the Federal or State Governments.

27. All releases into the ambient air shall meet all existing and proposed E.P.A. requirements.